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Phosphosilicate glass-ceramic used as dental prod. or component - with leucite , other crystal and glass phases, for high strength and chemical resistance

Patent Assignee: IVOCCLAR AG (IVOC-N)

Inventor: FRANK M; HOELAND W; RHEINBERGER V; SCHWEIGER M

Number of Countries: 012 Number of Patents: 011

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 690030	A1	19960103	EP 95250155	A	19950629	199606 B
AU 9521761	A	19960125	AU 9521761	A	19950619	199611
DE 4423793	C1	19960222	DE 4423793	A	19940701	199612
JP 8040746	A	19960213	JP 95165975	A	19950630	199616
CA 2153130	A	19960102	CA 2153130	A	19950630	199617
EP 690030	B1	19970507	EP 95250155	A	19950629	199723
AU 677122	B	19970410	AU 9521761	A	19950619	199727
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US 5698019	A	19971216	US 95497722	A	19950630	199805
JP 2703520	B2	19980126	JP 95165975	A	19950630	199809
CA 2153130	C	20000125	CA 2153130	A	19950630	200025

Priority Applications (No Type Date): DE 4423793 A 19940701

Cited Patents: EP 272745; FR 2558726; GB 2199027; US 3907577

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 690030	A1	G	15	C03C-010/00	
Designated States (Regional): AT CH DE FR GB IT LI SE					
CA 2153130	C	E		C03C-010/10	
DE 4423793	C1		13	C03C-010/00	
JP 8040746	A		11	C03C-010/10	
EP 690030	B1	G		C03C-010/00	
Designated States (Regional): AT CH DE FR GB IT LI SE					
AU 677122	B			C04B-035/19	Previous Publ. patent AU 9521761
DE 59500223	G			C03C-010/00	Based on patent EP 690030
US 5698019	A		8	C03C-010/10	
JP 2703520	B2		12	C03C-010/10	Previous Publ. patent JP 8040746
AU 9521761	A			C04B-035/19	
CA 2153130	A			C03C-010/10	

Abstract (Basic): EP 690030 A

A phosphosilicate glass-ceramic has a leucite crystal phase, at least one other crystal phase, and one or more glass phases, and contains 49.0-57.5 wt.% SiO₂, 11.4-21.0% Al₂O₃, 0.5-5.5% P₂O₅, 2.5-11.5% CaO, 9.0-22.5% K₂O, 1.0-9.5% Na₂O, 0-2.5% Li₂O, 0-2.0% B₂O₃, 0-3.0% TiO₂, 0.8-8.5% ZrO₂, 0-3.0% CeO₂, 0.25-2.5% F, 0-3.0% La₂O₃, 0-3.0% ZnO, 0-3.0% BaO, 0-3.0% MgO and 0-3.0% SrO.

USE - The ceramic is used as (component of) dental material or shaped dental prod., esp. (partial) crowns, bridges, inlays, onlays, artificial teeth, stump constructions or facets. The dental prods. are whole ceramic or metal-ceramic prods..

ADVANTAGE - The ceramic has suitable mechanical, optical, chemical, biological and processing properties, e.g. high strength and chemical resistance.

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Abstract (Equivalent): US 5698019 A

A phosphosilicate glass-ceramic has a leucite crystal phase, at least one other crystal phase, and one or more glass phases, and contains 49.0-57.5 wt.% SiO₂, 11.4-21.0% Al₂O₃, 0.5-5.5% P₂O₅, 2.5-11.5% CaO, 9.0-22.5% K₂O, 1.0-9.5% Na₂O, 0-2.5% Li₂O, 0-2.0% B₂O₃, 0-3.0% TiO₂, 0.8-8.5% ZrO₂, 0-3.0% CeO₂, 0.25-2.5% F, 0-3.0% La₂O₃, 0-3.0% ZnO, 0-3.0% BaO, 0-3.0% MgO and 0-3.0% SrO.

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ADVANTAGE - The ceramic has suitable mechanical, optical, chemical, biological and processing properties, e.g. high strength and chemical resistance.

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Title Terms: PHOSPHO; SILICATE; GLASS; CERAMIC; DENTAL; PRODUCT; COMPONENT; LEUCITE; CRYSTAL; GLASS; PHASE; HIGH; STRENGTH; CHEMICAL; RESISTANCE

Derwent Class: D21; L02; P32; P34

International Patent Class (Main): C03C-010/00; C03C-010/10; C04B-035/19

International Patent Class (Additional): A61C-005/08; A61C-013/083;

A61K-006/02; A61K-006/027; A61K-006/033; A61K-006/06; A61L-027/00;

C03C-003/083; C03C-003/087; C03C-003/093; C03C-003/097; C03C-003/112;

C03C-003/115; C03C-003/118; C04B-035/14; C04B-035/16

File Segment: CPI; EngPI

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